

REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks. Claims 1, 4, 16 and 24-26 have been amended. The amendment to claim 1 is supported by the original disclosure, for example at page 23, lines 7-8, page 25, lines 7, 10, 21 and 25-26, page 27, line 25, page 28, line 2, page 39, line 3-8, page 40, lines 9-10 and page 44, lines 12-24 of the specification. Claim 1 also has been amended to remove the non-elected subject matter. The amendment to claim 16 is supported by the original disclosure, for example at page 44, lines 18-22 of the specification. Claims 4 and 24-26 have been amended editorially. Claims 2-3, 5-14, 17 and 30 have been canceled without prejudice or disclaimer. Claim 31 is new, and is supported by the original disclosure, for example at page 39, lines 6-8 of the specification. No new matter has been added. Claims 1, 4, 15-16, 18-19, 24-26 and 31 are pending.

Claim Rejections – 35 USC § 112

Claims 2 and 30 are rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. Claims 2 and 30 have been canceled. Applicants do not concede the correctness of the rejection.

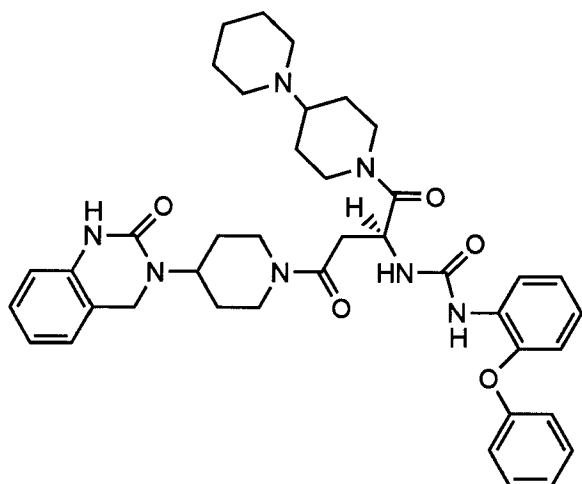
Claims 13 and 14 are rejected under 35 USC 112, second paragraph, for failing to provide an antecedent basis. Claims 13 and 14 have been canceled. Applicants do not concede the correctness of the rejection.

Withdrawal of the rejections is respectfully requested.

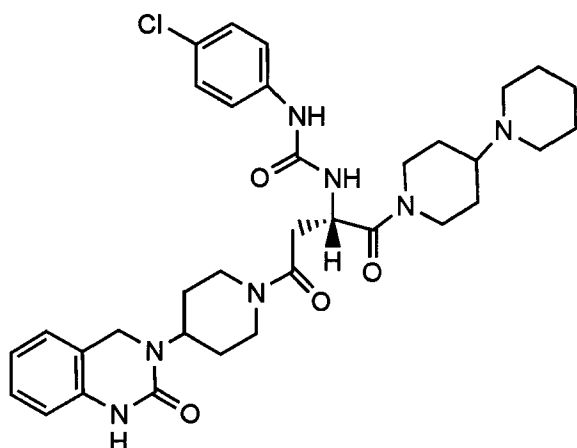
Claim Rejections – 35 USC § 102

Claims 1, 3-8, 10, 12, 15, 17 and 19 are rejected under 35 USC 102(b) as being anticipated by Chaturvedula et al. (WO/03104236). Applicants respectfully traverse the rejection.

Compound 135 of Chaturvedula has the following structure:



Compound 140 of Chaturvedula has the following structure:



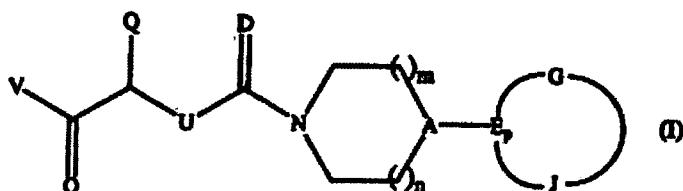
Compounds 135 and 140 correspond to the Formula (1) of claim 1 where X is ethylene substituted with carbonyl. On the other hand, claim 1 recites that X is a methylene which may be substituted with (1) a C₁₋₆ alkyl, (2) a C₂₋₆ alkenyl, (3) a C₂₋₆ alkynyl, (4) a phenyl, (5) a C₃₋₇ cycloalkyl, (6) a C₃₋₆ cycloalkenyl, (7) a C₇₋₁₆ aralkyl or (8) a 5- to 6-membered aromatic monocyclic heterocyclic group, where each of the C₁₋₆ alkyl of (1), the C₂₋₆ alkenyl of (2), the C₂₋₆ alkynyl of (3), the phenyl of (4), the C₃₋₇ cycloalkyl of (5), the C₃₋₆ cycloalkenyl of (6), the C₇₋₁₆ aralkyl of (7) and the 5- to 6-membered aromatic monocyclic heterocyclic group of (8) may be substituted with (i) a hydroxyl group, (ii) a thiol group which may be substituted with C₁₋₆ alkyl, (iii) a carboxyl, (iv) a C₁₋₆ alkoxy carbonyl, (v) an acyl, (vi) an amino which may be substituted with lower alkyl, carboxyl, C₁₋₆ alkoxy carbonyl or acyl, (vii) a halogen atom, (viii) a carbamoyloxy, (ix) a nitro group, (x) a cyano group, (xi) a lower alkyl which may be substituted with 1 to 5 halogen atoms, (xii) a phenyl which may be substituted with 1 to 5 halogen atoms,

(xiii) a lower alkoxy which may be substituted with a phenyl or 1 to 5 halogen atoms, (xiv) a 5- to 6-membered aromatic monocyclic heterocyclic group or (xv) a thioxo. Accordingly, Chaturvedula does not anticipate claim 1 and its dependent claims.

Claim Rejections – 35 USC § 103

Claims 1, 3-17 and 19 are rejected under 35 USC 103(a) as being unpatentable over Chaturvedula et al. (WO/03105236). Applicants respectfully traverse the rejection.

The rejection contends that the instantly claimed invention is obvious because the difference between Chaturvedula's compounds and the instantly claimed compounds is the substituent X as ethyl vs. methyl linker. However, Chaturvedula teaches compounds with the following core structure having a function as antagonists of CGRP receptors:



The group X in the Formula (1) of claim 1 corresponds to the moiety –C(COV)-U– in the above core structure. The moiety –C(COV)-U– is ethylene substituted with carbonyl. On the other hand, claim 1 recites that X is methylene which may be substituted with (1) a C₁₋₆ alkyl, (2) a C₂₋₆ alkenyl, (3) a C₂₋₆ alkynyl, (4) a phenyl, (5) a C₃₋₇ cycloalkyl, (6) a C₃₋₆ cycloalkenyl, (7) a C₇₋₁₆ aralkyl or (8) a 5- to 6-membered aromatic monocyclic heterocyclic group, where each of the C₁₋₆ alkyl of (1), the C₂₋₆ alkenyl of (2), the C₂₋₆ alkynyl of (3), the phenyl of (4), the C₃₋₇ cycloalkyl of (5), the C₃₋₆ cycloalkenyl of (6), the C₇₋₁₆ aralkyl of (7) and the 5- to 6-membered aromatic monocyclic heterocyclic group of (8) may be substituted with (i) a hydroxyl group, (ii) a thiol group which may be substituted with C₁₋₆ alkyl, (iii) a carboxyl, (iv) a C₁₋₆ alkoxycarbonyl, (v) an acyl, (vi) an amino which may be substituted with lower alkyl, carboxyl, C₁₋₆ alkoxycarbonyl or acyl, (vii) a halogen atom, (viii) a carbamoyloxy, (ix) a nitro group, (x) a cyano group, (xi) a lower alkyl which may be substituted with 1 to 5 halogen atoms, (xii) a phenyl which may be substituted with 1 to 5 halogen atoms, (xiii) a lower alkoxy which may be substituted with a phenyl or 1 to 5 halogen atoms, (xiv) a 5- to 6-membered aromatic monocyclic heterocyclic group or (xv) a thioxo.

The reference fails to provide any guidance or experimental data to show that changing the core structure of their compounds from having an ethylene substituted with carbonyl to

having a methylene which may be substituted with the substituents as recited in claim 1 would not change the intended function of their compounds as antagonists of CGRP receptors. Accordingly, claim 1 and its dependent claims are patentable over the reference.

As to claims 24-26, the reference teaches that their compounds are used for treating neurogenic vasodilation, neurogenic inflammation, migraine and other headaches, thermal injury, circulatory shock, flushing associated with menopause, airway inflammatory diseases, and other conditions where the treatment can be effected by the antagonism of CGRP-receptors. On the other hand, claim 24 is directed to a method of inhibiting blood coagulation in mammal and requires administering an effective amount of the compound according to claim 1 to the mammal. Claim 25 is directed to a method of inhibiting activated blood coagulation factor X in mammal and requires administering an effective amount of the compound according to claim 1 to the mammal. Claim 26 is directed to a method of preventing and/or treating myocardial infarction, cerebral infarction, deep vein thrombosis, pulmonary thromboembolism or arteriosclerosis obliterans in mammal and requires administering an effective amount of the compound according to claim 1 to the mammal. Nothing in the reference teaches or suggests the features of claims 24-26. Accordingly, claims 24-26 are further removed from the reference.

New claim 31 is patentable over the reference for at least the same reasons discussed above for claim 1.

In view of the above, favorable reconsideration in the form of a notice of allowance is courteously requested. The Examiner is invited to contact the undersigned at 612.455.3804 if there are any remaining issues.

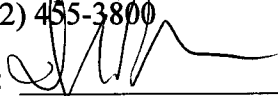


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Respectfully submitted,

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